

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FOURTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: IT204

Course Name: OBJECT ORIENTED TECHNIQUES (IT)

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two questions, each carries 15 marks

Marks

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|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1 | a) Discuss the merits and demerits of object oriented technology | 4 |
| | b) Write program to implement copy constructor in C++ | 5 |
| | c) What are different types of access specifiers supported by C++? Explain with a suitable example | 6 |
| 2 | a) Explain unary operator overloading with an example | 6 |
| | b) Write a program that consists of two classes time12 and time24. The first one maintains time on a 12 hour basis, whether the other one maintains it on a 24 hour basis. Provide conversion functions to carry out the conversion from object of one type to another (Use copy constructor) . | 9 |
| 3 | a) Design a program to find the sum of 2 matrices by passing arrays to function | 8 |
| | b) Explain static member functions with an example | 7 |

PART B

Answer any two questions, each carries 15 marks

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|---|-----------------------------------------------------------------------------------------------|----|
| 4 | a) What are the different forms of inheritance supported by C++? Explain them with an example | 10 |
| | b) What is containership? How is it differ from inheritance | 5 |
| 5 | a) Differentiate pointer to an array and array of pointers | 8 |
| | b) Describe run time memory management in C++? How does it differ from C's memory management? | 7 |
| 6 | a) Write a C++ program to store the capitals of 5 states by using array of pointer to object. | 7 |
| | b) How do constructors and destructors behave in inheritance | 8 |

PART C

Answer any two questions, each carries 20 marks

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|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 7 | a) Write short note on C++ exception handling mechanism | 6 |
| | b) Differentiate between function overloading and function template | 8 |
| | c) Define the term generic programming? Write a generic function min() that returns the lesser of its two arguments? | 6 |
| 8 | a) Describe the various file mode parameters | 6 |
| | b) There are 100 records present in a file. Each record contains item_code, item_name and quantity. Write a program to read these records, arrange them in the ascending order and write them in the same file overwriting the earlier records. | 8 |
| | c) What are the advantages of using this pointer in a program | 6 |
| 9 | a) Write a function template to implement binary search in an array | 10 |
| | b) Discuss different sequential input output file operations with examples | 10 |